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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,260	09/11/2003	Masaru Akiyama	Q77433	3538
65565	7590	05/22/2007	EXAMINER	
SUGHRUE-265550			KRAUSE, JUSTIN MITCHELL	
2100 PENNSYLVANIA AVE. NW			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037-3213			3682	
MAIL DATE		DELIVERY MODE		
05/22/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/659,260	AKIYAMA, MASARU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Justin Krause	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 26 March 2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-7 is/are pending in the application.  
 4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2 and 7 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 3/26/07 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Teramachi (US Patent 6,210,039).

Teramachi discloses a linear guide device comprising:

- a guide rail (1) extending in an axial direction and having a first raceway groove (51,52,53,54) extending in the axial direction
- a slider (4) having a second raceway groove (61,62,63,64) opposed to said first raceway groove and supported by the guide rail, movable with a plurality of rolling elements
- the ball diameter ratio Dg/Dw is set in a range of 0.33-0.5

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3682

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teramachi in view of Okita et al (US Patent 6,620,262).

Teramachi discloses all of the claimed subject matter as described above but does not disclose removal of a decarburized layer.

Okita teaches that it is a known problem for a decarburized layer forming on bearing races after forming processes, such as hot rolling, and that the decarburized surface layer is softer than the hardness of the remainder of the bearing. If this layer not removed, the capabilities of the bearing such as life and abrasion resistance may be deteriorated. It is a known process to remove the decarburized layer by turning or grinding after the forming process. (Col 2, line 66-Col 4, line 3)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the process of removing the decarburized layer from a hot rolled bearing raceway as taught by Okita, the motivation would have been to prevent loss of bearing life and deteriorated abrasion resistance that is caused by leaving the decarburized layer intact.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teramachi as applied to claim 1 above, in view of Tanaka (US Patent 5,123,754).

Teramachi does not disclose the first or second raceway groove shaped as a gothic arch.

Tanaka teaches a raceway (2 or 5) with a gothic arch cross section fore the purpose of increasing load bearing capability in either the horizontal or vertical direction

(col 2, line 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tanaka to include a gothic arch shaped raceway for the desired purpose of increasing load bearing capability as taught by Tanaka.

***Response to Arguments***

Applicant's arguments filed March 26, 2007 have been fully considered but they are not persuasive. Applicant argues Teramachi sets out a broad range which does not disclose any specific point within the Applicant's claimed range.

The examiner disagrees that Teramachi's claimed range is broad. It sets out a specific desired range of values with which the invention operates optimally. Teramachi is seeking to eliminate error (Col 1, line 63-Col 2, line 14), and for better supporting loads (col 2, line 55-67). The present invention operates within a similar range, also for the purpose of optimizing performance (specification page 5, lines 3-10).

Additionally, Applicant has also failed to provide any evidence that the present invention's claimed range would produce any unexpected results which would render the present invention non-obvious over the invention of Teramachi (MPEP 2131.03).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

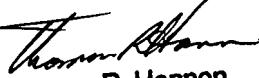
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK 5/14/07  
JMK

  
Thomas R. Hannon  
Primary Examiner